

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A structure of an embedded channel write/erase flash memory cell,

5 comprising mainly:

an N-substrate;

a flash memory cell region comprising mainly:

[[and]]

a deep P-well formed [[on]] in said substrate;

10 an N-well formed [[on]] in said deep P-well, a deep [[P-type]] p-type region and a shallow p-type region being implanted in predetermined positions of said N-well; [[and]]

15 a first n-type region formed at one side of said shallow p-type region and in said deep p-type region in said N-well to be used as a drain;
a second n-type region formed at the other side of said shallow p-type region in said N-well
20 to be used as a source; and

a stacked gate formed on said N-well; and

a CMOS device region comprising mainly:

a first deep P-well formed [[on]] in said substrate;

25 a first N-well formed [[on]] in said first deep P-well, a plurality of p-type regions being implanted in predetermined positions of said first N-well;

a second deep P-well formed [[on]] in said substrate; and

30 a second N-well formed [[on]] in said second deep P-well, a plurality of p-type regions being

implanted in predetermined positions of said
second N-well.

5 Claim 2 (original): The structure of an embedded channel
write/erase flash memory cell as claimed in claim 1,
wherein an oxide layer is further provided between said
N-well and said stacked gate of said flash memory cell
region.

10 Claim 3 (original): The structure of an embedded channel
write/erase flash memory cell as claimed in claim 2,
wherein a smiling effect pattern is caused by oxidation
between said stacked gate and said oxide layer.

15 Claim 4 (canceled)

Claim 5 (original): The structure of an embedded channel
write/erase flash memory cell as claimed in claim 1,
wherein the implanted depth of said deep p-type region
20 in said N-well of said flash memory cell region is larger
than that of said shallow p-type region.

Claim 6 (original): The structure of an embedded channel
write/erase flash memory cell as claimed in claim 1,
25 wherein said deep p-type region in said N-well of said
flash memory cell region is connected with one end of
said shallow p-type region.

Claim 7 (canceled)

30

Claim 8 (currently amended): The structure of an
embedded channel write/erase flash memory cell as

claimed in claim [[7]] 1, wherein a field oxide layer and an n-type ion channel barrier layer can also be provided between said second n-type region and said shallow p-type region in said N-well, said n-type ion
5 channel barrier layer being disposed below said field oxide layer.

Claim 9 (currently amended): The structure of an embedded channel write/erase flash memory cell as
10 claimed in claim [[14]] 1, wherein said first n-type region implanted in said deep p-type region of said flash memory cell region is connected to said deep p-type region via an electrical short circuit.

15 Claim 10 (currently amended): The structure of an embedded channel write/erase flash memory cell as claimed in claim 9, wherein said electrical short circuit is formed by using a metal contact to penetrate a junction [[of]] between said first n-type region in
20 said deep p-type region and said deep p-type region.

Claim 11 (currently amended): The structure of an embedded channel write/erase flash memory cell as claimed in claim 9, wherein said electrical short
25 circuit is formed by using a metal contact to connect said exposed first n-type region in said deep p-type region with said deep p-type region.

Claim 12 (canceled)

30

Claim 13 (currently amended): The structure of an embedded channel write/erase flash memory cell as

claimed in claim 1, wherein said CMOS device region further comprises a first P-well formed [[on]] in said substrate and at one side of said first deep P-well.

5 Claim 14 (currently amended): The structure of an embedded channel write/erase flash memory cell as claimed in claim 13, wherein said CMOS device region further comprises a second P-well formed on said substrate and at one [[said]] side of said first P-well.

10

Claim 15 (currently amended): The structure of an embedded channel write/erase flash memory cell as claimed in claim 1, wherein said CMOS device region further comprises a first P-well formed [[on]] in said
15 first deep P-well.

Claim 16 (currently amended): The structure of an embedded channel write/erase flash memory cell as claimed in claim 1, wherein said CMOS device region
20 further comprises a second P-well formed [[on]] in said second deep P-well.